

REMARKS

This Amendment is filed in response to the Office Action mailed on September 19, 2005. All objections and rejections are respectfully traversed.

Claims 1 to 33 are currently pending in the application.

Claims 9-11, 14-17, 20-21, 23, 25, and 27 are allowed.

Claims 28 to 33 are added to better claim the invention.

35 U.S.C. §102

At paragraph 1 of the Office Action, claims 1-2, 7-8, 12-13, 18, 22, 24, and 26 were rejected under 35 U.S.C. §102 as being anticipated by Li et al., US Patent No. 6,529,508, Issued on March 4, 2003, hereinafter Li.

The present invention as set forth in representative claim 1 comprises in part:

1. A method for generating lookup tables and a final equivalence set for use in classifying a network packet in accordance with a policy that specifies one or more classes, each class containing one or more match statements, the match statements being one of a stand-alone matching rule and a matching rule in an access control list (ACL) defining one or more matching rules, the method comprising the steps of:

generating a super class that contains all of the matching rules associated with the classes specified by the policy; and

converting the matching rules of the super class into a single, hierarchical arrangement of lookup tables and associated equivalence sets, the hierarchical arrangement having a plurality of levels including a first level and a final level, the final equivalence set being associated with the final level.

By way of background Li describes a classification method for classifying individual packets using a single processor. The classification method processes multiple parameter values for a packet using parallel threads to obtain answer sets. The answer sets which contain a True value become answer indexes. Then an “AND” operation is applied by the single processor to all answer indexes to identify the particular rule matched by the packet.

Applicant respectfully urges that Li does not show Applicant’s claimed novel step of *converting the matching rules of the super class into a single, hierarchical arrangement of lookup tables and associated equivalence sets, the hierarchical arrangement having a plurality of levels including a first level and a final level, the final equivalence set being associated with the final level*. In further detail, Applicant’s *hierarchical arrangement* allows a first level equivalence set to be merged to produce a second level of equivalence set and lookup table and the second level equivalence set are merged to produce a third level of equivalence set and lookup table and so on until a single lookup table and equivalence set is produced. In sharp contrast, Li only describes a method where each rule must be done separately, and then an “AND” process must be applied to all.

An advantage of Applicant’s claimed method over Li’s method is that Applicant’s method allows faster classification than Li and completion of the processing is done in a deterministic amount of time regardless of the number of classes in the policy, as explained in the Specification at page 3, lines 10-14, which states:

“It would be desirable to have a technique that can classify a packet in accordance with a multi-class policy in a manner that is faster than a sequential search and that can complete the processing in a deterministic amount of time regardless of the number of classes in the policy.”

Accordingly, Applicant respectfully urges that the Li patent is legally precluded from anticipating the claimed invention under 35 U.S.C. §102 because of the absence from the Li patent of Applicant’s *converting the matching rules of the super class into a single, hierarchical arrangement of lookup tables and associated equivalence sets, the hierarchical arrangement having a plurality of levels including a first level and a final level, the final equivalence set being associated with the final level.*

34 U.S.C. §103

At paragraph 7 of the Office Action, claim 19 was rejected under 35 U.S.C. §103 as being unpatentable over Li in view of Kloth et al., US Patent No. 6,643,260, hereinafter Kloth.

Applicant respectfully notes that claim 19 is a dependent claim that depends from an independent claim which is believed to be in condition for allowance. Accordingly, claim 19 is believed to be in condition for allowance.

Therefore, all independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims, and therefore in condition for allowance.

Favorable action is respectfully solicited.

Please charge any additional fee occasioned by this paper to our Deposit Account
No. 03-1237.

Respectfully submitted,



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